

Part 1

Having an in-depth knowledge of the Use of ICT in Science

Background information

ICT contributes to **Science** in a number of ways:

Finding Things Out

- identifying sources of information and discriminating between them
- Planning and putting together a search strategy, including framing useful questions, widening and narrowing searches
- Searching for information, including key words and logical operators such as AND, OR and NOT
- Collecting and structuring data and storing it for later retrieval, interpretation and correction
- Asking questions, predicting patterns and rules and formulating hypotheses
- Interpreting what is retrieved, including remotely gathered data, and evaluating scientific evidence
- Considering validity, reliability and reasonableness.

Communicate and Exchange Ideas

- Pursuing a line of investigation by communicating with a wider body of people
- Presenting and communicating ideas using different media.

Try Things Out/ Make Things Happen

- Using technology to gather information automatically
- Enabling the analysis and interpretation of experimental data e.g. by drawing graphs and changing parameters
- Observing, measuring, recording and manipulating variables
- Modelling activities which involve changing variables or making choices
- Giving a series of instructions and sequencing actions
- Considering cause and effect
- Gain feedback and use it effectively.